

Application No.: 10/596,103

Amendment and Response dated May 27, 2010

Reply to Office Action of January 27, 2010

Docket No.: 1848-7 PCT/US/RCE

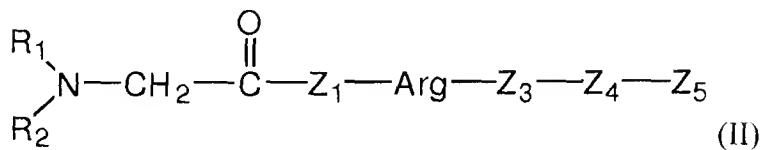
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AMENDMENTS TO THE CLAIMS:

The following list of claims will replace all prior versions, and listings, of claims. Please amend the claims as follows:

1.-16. (Cancelled).

17. (Currently amended) A method for treating shock comprising administering to a subject an a therapeutically effective amount of a peptide of Formula II



wherein:

R_1 and R_2 being equal or different denote hydrogen, a saturated or unsaturated hydrocarbon comprising from 1 to 10 carbon atoms;

Z_1 denotes a histidine residue;

Arg denotes an arginine residue;

Z_3 denotes a proline or valine residue;

Z_4 denotes a leucine or valine residue; and

Z_5 denotes a peptide derived from the Bbeta chain of the fibrin, which peptide has the biological property of matching the inducible VE-cadherin binding motif on the B β -chain (i.e., B β ₁₅₋₄₂) of human fibrin comprising:

Asp-Lys-Lys-Arg-Glu-Glu-Ala-Pro-Ser-Leu-Arg-Pro-Ala-Pro-Pro-Pro-Ile-Ser-Gly-Gly-Gly-Tyr-Arg (SEQ ID NO: 8).

18. (Previously presented) The method according to claim 17, wherein the saturated or unsaturated hydrocarbon in the meaning of R_1 and R_2 comprises 1 to 3 carbon atoms.

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19. (Previously presented) The method according to claim 17, wherein:

Z_3 denotes a proline residue; and

Z_4 denotes a leucine residue.

20. (Previously presented) The method according to claim 18, wherein:

Z_3 denotes a proline residue; and

Z_4 denotes a leucine residue.

21. (Currently amended) A method for treating shock comprising administering to a subject ~~an a~~ therapeutically effective amount of a peptide having the N-terminal sequence:

Gly-His-Arg-Pro-Leu-Asp-Lys-Lys-Arg-Glu-Glu-Ala-Pro-Ser-Leu-Arg-Pro-Ala-Pro-Pro-Pro-Ile-Ser-Gly-Gly-Gly-Tyr-Arg (SEQ ID NO: 3);

which peptide has the biological property of matching the inducible VE-cadherin binding motif on the B β -chain (i.e., B β ₁₅₋₄₂) of human fibrin.

22. (Previously presented) The method according to claim 21, wherein the peptide is of formula:

Gly-His-Arg-Pro-Leu-Asp-Lys-Lys-Arg-Glu-Glu-Ala-Pro-Ser-Leu-Arg-Pro-Ala-Pro-Pro-Pro-Ile-Ser-Gly-Gly-Gly-Tyr-Arg (SEQ ID NO: 3).

23. (Currently amended) The method of claim 17, wherein the shock is associated with one or more from the group comprising bacterial toxins, disseminated intravascular coagulopathy, necrotizing fasciitis, hemorrhagic shock following viral infection, ~~in particular caused by filovirus, arenaviridae, bunyaviridae, flavivirus, dengue, acute hemorrhagic respiratory failure caused by infectious agents or autoimmune diseases, and organ failure after organ injury, in particular through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, and organ dysfunction of grafted organs.~~

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24. (Currently amended) The method of claim 18, wherein the shock is associated with one or more from the group comprising bacterial toxins, disseminated intravascular coagulopathy, necrotizing fasciitis, hemorrhagic shock following viral infection, ~~in particular caused by filovirus, arenaviridae, bunyaviridae, flavivirus, dengue, acute hemorrhagic respiratory failure caused by infectious agents or autoimmune diseases, and organ failure after organ injury, in particular through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, and organ dysfunction of grafted organs.~~

25. (Currently amended) The method of claim 19, wherein the shock is associated with one or more from the group comprising bacterial toxins, disseminated intravascular coagulopathy, necrotizing fasciitis, hemorrhagic shock following viral infection, ~~in particular caused by filovirus, arenaviridae, bunyaviridae, flavivirus, dengue, acute hemorrhagic respiratory failure caused by infectious agents or autoimmune diseases, and organ failure after organ injury, in particular through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, and organ dysfunction of grafted organs.~~

26. (Currently amended) The method of claim 20, wherein the shock is associated with one or more from the group comprising bacterial toxins, disseminated intravascular coagulopathy, necrotizing fasciitis, hemorrhagic shock following viral infection, ~~in particular caused by filovirus, arenaviridae, bunyaviridae, flavivirus, dengue, acute hemorrhagic respiratory failure caused by infectious agents or autoimmune diseases, and organ failure after organ injury, in particular through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, and organ dysfunction of grafted organs.~~

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27. (Currently amended) The method of claim 21, wherein the shock is associated with one or more from the group comprising bacterial toxins, disseminated intravascular coagulopathy, necrotizing fasciitis, hemorrhagic shock following viral infection, ~~in particular caused by filovirus, arenaviridae, bunyaviridae, flavivirus, dengue, acute hemorrhagic respiratory failure caused by infectious agents or autoimmune diseases, and organ failure after organ injury, in particular through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, and organ dysfunction of grafted organs.~~

28. (Currently amended) The method of claim 22, wherein the shock is associated with one or more from the group comprising bacterial toxins, disseminated intravascular coagulopathy, necrotizing fasciitis, hemorrhagic shock following viral infection, ~~in particular caused by filovirus, arenaviridae, bunyaviridae, flavivirus, dengue, acute hemorrhagic respiratory failure caused by infectious agents or autoimmune diseases, and organ failure after organ injury, in particular through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, and organ dysfunction of grafted organs.~~

29. (New) The method of claim 23, wherein hemorrhagic shock following viral infection is caused by filovirus, arenaviridae, bunyaviridae or flavivirus.

30. (New) The method of claim 23, wherein acute hemorrhagic respiratory failure is caused by an infectious agent.

31. (New) The method of claim 23, wherein acute hemorrhagic respiratory failure is caused by an autoimmune disease.

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32. (New) The method of claim 23, wherein organ failure after organ injury occurs through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, or organ dysfunction of grafted organs.

33. (New) The method of claim 17, wherein the shock is associated with acute lung injury.

34. (New) The method of claim 17, wherein the shock is associated with dengue fever.

35. (New) The method of claim 24, wherein hemorrhagic shock following viral infection is caused by filovirus, arenaviridae, bunyaviridae or flavivirus.

36. (New) The method of claim 24, wherein acute hemorrhagic respiratory failure is caused by an infectious agent.

37. (New) The method of claim 24, wherein acute hemorrhagic respiratory failure is caused by an autoimmune disease.

38. (New) The method of claim 24, wherein organ failure after organ injury occurs through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, or organ dysfunction of grafted organs.

39. (New) The method of claim 18, wherein the shock is associated with acute lung injury.

40. (New) The method of claim 18, wherein the shock is associated with dengue fever.

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41. (New) The method of claim 25, wherein hemorrhagic shock following viral infection is caused by filovirus, arenaviridae, bunyaviridae or flavivirus.

42. (New) The method of claim 25, wherein acute hemorrhagic respiratory failure is caused by an infectious agent.

43. (New) The method of claim 25, wherein acute hemorrhagic respiratory failure is caused by an autoimmune disease.

44. (New) The method of claim 25, wherein organ failure after organ injury occurs through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, or organ dysfunction of grafted organs.

45. (New) The method of claim 19, wherein the shock is associated with acute lung injury.

46. (New) The method of claim 19, wherein the shock is associated with dengue fever.

47. (New) The method of claim 26, wherein hemorrhagic shock following viral infection is caused by filovirus, arenaviridae, bunyaviridae or flavivirus.

48. (New) The method of claim 26, wherein acute hemorrhagic respiratory failure is caused by an infectious agent.

49. (New) The method of claim 26, wherein acute hemorrhagic respiratory failure is caused by an autoimmune disease.

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50. (New) The method of claim 26, wherein organ failure after organ injury occurs through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, or organ dysfunction of grafted organs.

51. (New) The method of claim 20, wherein the shock is associated with acute lung injury.

52. (New) The method of claim 20, wherein the shock is associated with dengue fever.

53. (New) The method of claim 27, wherein hemorrhagic shock following viral infection is caused by filovirus, arenaviridae, bunyaviridae or flavivirus.

54. (New) The method of claim 27, wherein acute hemorrhagic respiratory failure is caused by an infectious agent.

55. (New) The method of claim 27, wherein acute hemorrhagic respiratory failure is caused by an autoimmune disease.

56. (New) The method of claim 27, wherein organ failure after organ injury occurs through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, or organ dysfunction of grafted organs.

57. (New) The method of claim 21, wherein the shock is associated with acute lung injury.

58. (New) The method of claim 21, wherein the shock is associated with dengue fever.

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59. (New) The method of claim 28, wherein hemorrhagic shock following viral infection is caused by filovirus, arenaviridae, bunyaviridae or flavivirus.

60. (New) The method of claim 28, wherein acute hemorrhagic respiratory failure is caused by an infectious agent.

61. (New) The method of claim 28, wherein acute hemorrhagic respiratory failure is caused by an autoimmune disease.

62. (New) The method of claim 28, wherein organ failure after organ injury occurs through myocardial infarction, vascular surgery, clamping of organs, hemorrhagic shock, lung infarction, liver infarction, gut infarction, surgical procedures and stroke, or organ dysfunction of grafted organs.

63. (New) The method of claim 22, wherein the shock is associated with acute lung injury.

64. (New) The method of claim 22, wherein the shock is associated with dengue fever.